EXAMINER'S AMENDMENT

- An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

- Authorization for this examiner's amendment was given in a telephone interview with applicant's representative, EDOUARD GARCIA, on 01/22/2010.

AMENDMENT TO THE CLAIMS

The listing of claims as below replaces listing in the CLAIMS that was filed by applicant in the APPEAL BRIEF on 11/12/2009.

Claim 1 (Previously Presented): A method of organizing, a collection of objects arranged in a sequence ordered in accordance with a selected dimension of context-related metadata respectively associated with the objects, comprising operating a processor to perform operations comprising:

classifying the objects in the sequence to generate a series of object clusters, wherein the classifying comprises sequentially processing each of the objects as a respective candidate for segmentation into a respective current one of the object clusters in the series and, for each of the candidate objects,

determining a candidate object interval separating the candidate object from an adjacent object in the sequence already segmented into the current object cluster, the candidate object interval being measured in the selected dimension of the context-related metadata,

comparing the candidate object interval to a weighted measure of cluster extent for the current object cluster, the measure of cluster extent corresponding to a current distance spanned by all the objects in the current object cluster measured in the selected dimension of the context-related metadata, and

comparing the candidate object interval to a weighted measure of object density for the current object cluster, the measure of object density corresponding to a measure of distribution of distances separating adjacent ones of the objects in the current object cluster measured in the selected dimension of the context-related metadata.

Claim 2 (Previously Presented): The method of claim 1, wherein the measure of cluster extent for each current object cluster corresponds to a temporal distance spanned by recorded generation times associated with all objects in the current object cluster.

Claim 3 (Previously Presented): The method of claim 1, wherein the measure of cluster extent for each current object cluster corresponds to a spatial distance spanned by recorded generation locations associated with all objects in the current object cluster.

Claim 4 (previously presented): The method of claim 1, wherein the measure of object density for each current object cluster corresponds to an average temporal distance separating adjacent objects in the current object cluster.

Claim 5 (Previously Presented): The method of claim 1, wherein the measure of object density for each current object cluster corresponds to an average spatial distance separating adjacent objects in the current object cluster.

Claim 6 (Previously Presented): The method of claim 1, wherein the classifying comprises merging consecutive ones of the candidate objects into a current one of the object clusters until the candidate object interval determined for a current one of the candidate objects exceeds the weighted measure of cluster extent for the current cluster, at which point a successive one of the object clusters in the series is initiated with the current candidate object.

Claim 7 (Previously Presented): The method of claim 1, wherein the classifying comprises merging consecutive ones of the candidate objects into a current one of the object clusters until the candidate object interval determined for a current one of the candidate objects exceeds the weighted measure of object density for the current object cluster, at which point a successive one of the object clusters in the series is

initiated with the current candidate object.

Claim 8 (Previously Presented): The method of claim 1, wherein the processing comprises determining the weighted measures of cluster extent by applying to the measures of cluster extent respective weights that decrease with increasing sizes of the respective object clusters.

Claim 9 (Previously Presented): The method of claim 1, wherein the processing comprises determining the weighted measures of cluster extent by applying to the measures of cluster extent respective weights that decrease with increasing sizes of the respective object clusters.

Claim 10 (Previously Presented): The method of claim 1, further comprising customizing at least one of the weights applied to the measures of cluster extent based on an analysis of objects in the corresponding object cluster.

Claim 11 (Previously Presented): The method of claim 10, wherein the customizing comprises scaling at least one of the weights applied to the measures of cluster extent based on a fractal dimension estimate of recorded time generation meta data associated with the objects in the collection.

Claim 12 (Previously Presented): The method of claim 1, further comprising customizing at least one of the weights applied to the measures of cluster object density based on an analysis of objects in the corresponding object cluster.

Claim 13 (Previously Presented): The method of claim 12, wherein the customizing comprises scaling at least one of the weights applied to the measures of cluster extent based on a fractal dimension estimate of recorded time generation meta data associated with the objects in the collection.

Claim 14 (Previously Presented): The method of claim 1, wherein the processing further comprises comparing the object density of a candidate object cluster consisting of the current object cluster and the candidate object with the weighted measure of object density for the current object cluster.

Claim 15 (Previously Presented): The method of claim 14, wherein the measure of object density for each current object cluster corresponds to an average temporal distance separating adjacent objects in the current object cluster.

Claim 16 (Previously Presented): The method of claim 14, wherein the measure of object density for each current object cluster corresponds to an average spatial distance separating adjacent objects in the current object cluster.

Claim 17 (Previously Presented): The method of claim 14, wherein the measure of object density for each object cluster corresponds to a moving average distance separating adjacent objects in the current object cluster.

Claim 18 (Previously Presented): The method of claim 14, wherein the processing comprises determining the weighted measures of cluster extent by applying to the measures of cluster extent respective weights that decrease with increasing sizes of the respective object clusters.

Claim 19 (Previously Presented): The method of claim 1, wherein the processing comprises processing each of the candidate objects sequentially beginning at a first end of the object sequence.

Claim 20 (Previously Presented): The method of claim 19, wherein the processing further comprises processing each of the candidate objects sequentially beginning at a second end of the object sequence opposite the first end.

Claim 21 (Previously Presented): The method of claim 1, wherein the sequence to be segmented includes objects of the following types: text, audio, graphics, still images, video and business events.

Claim 22 (Currently Amended): A system of organizing a collection of objects arranged in a sequence ordered in accordance with a selected dimension of context-related metadata respectively associated with the objects, comprising:

a computer-readable medium storing computer-readable instructions; and

a data processing unit coupled to the ~~memory~~ computer-readable medium operable to execute the instructions, and based at least in part on the execution of the instructions operable to perform operations comprising

classifying the objects in the sequence to generate a series of object clusters, wherein ~~the segmentation engine is operable to sequentially process~~ each of the objects is sequentially processed as a respective candidate for segmentation into a respective current one of the object clusters in the series and, for each of the candidate objects, perform operations comprising

determining a candidate object interval separating the candidate object from an adjacent object in the sequence already segmented into the current object cluster, the candidate object interval being measured in the selected dimension of the context-related metadata,

compare the candidate object interval to a weighted measure of cluster extent for the current object cluster, the measure of cluster extent corresponding to a current distance spanned by all the objects in the current object cluster measured in the selected dimension of the context-related metadata, and

comparing the candidate object interval to a weighted measure of cluster object density for the current object cluster, the measure of object density corresponding to a measure of distribution of distances separating adjacent ones of the objects in the current object cluster measured in the selected dimension of the context-related metadata.

Claim 23 (Currently Amended): A method of organizing a collection of objects, comprising operating a processor to perform operations comprising:

segmenting objects from the collection into clusters;

extracting context-related meta data corresponding to object generation locations associated with the objects, wherein the extracted context-related meta data are ~~and~~ parsable into multiple levels of a geographical name hierarchy generated for browsing; and

assigning location names to clusters, wherein each cluster is assigned a respective location name based on the associated extracted context-related meta data corresponding to a level of the geographical name hierarchy selected to distinguish segmented clusters from one another.

Claims 24-26 (Canceled)

Claim 27 (Previously Presented): The method of claim 23, wherein the context- related meta data corresponds to recorded information relating to country, city, and state of object generation.

Claim 28 (Original): The method of claim 23, wherein the context-related meta data corresponds to both object generation times and object generation locations.

Claim 29 (Currently Amended): The method of claim 23, further comprising automatically naming objects in a given cluster based on the location name assigned to the given cluster.

Claim 30 (Original): The method of claim 29, wherein the objects in the given cluster are named automatically in accordance with a chronological ordering of the objects in the given cluster.

Claim 31 (Original): The method of claim 29, further comprising storing objects in the given cluster in a tree structure organized by cluster and labeled in accordance with the assigned names.

Claim 32 (Currently Amended): A system of organizing a collection of objects, comprising:

a computer-readable medium storing computer-readable instructions; and

a data processing unit coupled to the computer-readable medium ~~memory~~, operable to execute the instructions, and based at least in part on the execution of the instructions operable to perform operations comprising

segmenting objects from the collection into clusters; and

extracting context-related meta data corresponding to object generation locations associated with the objects, wherein the extracted context-related meta data are ~~and~~ parsable into multiple levels of a geographical name hierarchy generated for browsing;[[,]] and

~~assign~~ assigning location names to each cluster, wherein each cluster is assigned a respective location name based on the associated extracted context-related meta data corresponding to a level of the geographical name hierarchy selected to distinguish segmented clusters from one another.

Claim 33 (Currently Amended): A method of organizing a collection of objects, comprising operating a processor to perform operations comprising:

accessing a sequence of objects segmented into object clusters each including multiple constituent objects arranged in a respective sequence in accordance with context-related meta data associated with the objects;

~~selecting~~ for each object cluster selecting at least two constituent objects representative of beginning and ending instances in the corresponding constituent object sequence in the object cluster, wherein the at least two constituent object comprising first and last constituent objects in the corresponding constituent object sequence of the object cluster; and

in a user interface, graphically presenting the selected ~~representative~~ constituent objects of each object cluster without graphically presenting representations of unselected ones of the constituent objects of the object clusters.

Claim 34 (Currently Amended): The method of claim 33, further comprising graphically presenting a selected one of the object clusters as a stack of partially overlapping images representative of multiple objects in the selected object cluster.

Claim 35 (Previously Presented): The method of claim 34, further comprising revealing an increased portion of a given one of the representative images in the stack in response to detection of a user-controlled display icon positioned over the given representative image.

Claim 36 (Currently Amended): The method of claim 33, wherein the presenting comprises presenting the selected ~~representative~~ constituent objects with the spacing between adjacent ones of the selected ~~representative~~ constituent objects in the same object cluster smaller than the spacing between adjacent ones of the selected ~~representative~~ constituent objects in different object clusters.

Claim 37 (Currently Amended): The method of claim 33, further comprising merging objects of one object cluster into an adjacent object cluster in response to user input.

Claim 38 (Currently Amended): The method of claim 37, wherein objects of one object cluster are merged into an adjacent object cluster in response to dragging and dropping of the objects to be merged.

Claim 39 (Currently Amended): The method of claim 37, wherein the objects of the one object cluster are merged into the adjacent object cluster in response to user selection of an icon for merging the object

clusters.

Claim 40 (Currently Amended): The method of claim 33, further comprising presenting a graphical representation of distributions of objects in the object clusters.

Claim 41 (Currently Amended): The method of claim 40, wherein a object distribution for a given object cluster is presented as object instances plotted along an axis corresponding to a scaled representation of the context-related extent spanned by the given object cluster.

Claim 42 (Currently Amended): The method of claim 40, further comprising splitting a given object cluster in response to user selection of a point in the representation of the object distribution presented for the given object cluster.

Claim 43 (Currently Amended): The method of claim 40, further comprising automatically splitting a given object cluster into two or more object clusters in response to user input.

Claim 44 (Currently Amended): The method of claim 43, wherein the given object cluster is automatically split into a user-selected number of sub-clusters.

Claim 45 (Currently Amended): The method of claim 43, wherein the given object cluster is automatically split based on relative sizes of intervals between successive objects in the given object cluster.

Claim 46 (Original): The method of claim 33, wherein the context-related meta data corresponds to object generation times.

Claim 47 (Original): The method of claim 33, wherein the context-related meta data corresponds to object generation locations.

Claim 48 (Original): The method of claim 33, wherein the segmented sequence includes objects of the following types: text, audio, graphics, still images, video, and business events.

Claim 49 (Currently Amended): The method of claim 33, further comprising graphically presenting at least one link to an object of [[a]] an object cluster arranged in a sequence in accordance with time-related meta data in a calendar format.

Claim 50 (Currently Amended): The method of claim 33, further comprising graphically presenting at least one link to an object of [[a]] an object cluster arranged in a sequence in accordance with location-related meta data in a map format.

Claim 51 (Currently Amended): A system of organizing a collection of objects, comprising:

a computer-readable medium storing computer-readable instructions; and

a data processing unit coupled to the computer-readable medium ~~memory~~, operable to execute the instructions, and based at least in part on the execution of the instructions operable to perform operations comprising

accessing a sequence of objects from the collection segmented into clusters each including multiple objects arranged in a respective sequence in accordance with context-related meta data associated with the objects;

~~selecting~~ for each object cluster selecting at least two constituent objects representative of beginning and ending instances in the corresponding constituent object sequence in the object cluster, wherein the at least two constituent objects comprising first and last constituent objects in the corresponding constituent object sequence of the object cluster; and

in a user interface, graphically presenting the selected ~~representative~~ constituent objects of each object cluster on a screen without graphically presenting representations of unselected ones of the constituent objects of the object clusters, wherein ~~the user interface layout engine presents~~ the selected ~~representative~~ constituent objects are presented with the spacing between adjacent ones of the selected ~~representative~~ constituent objects in the same object cluster smaller than the spacing between adjacent ones of the selected ~~representative~~ constituent objects in different object clusters.

REASONS FOR ALLOWANCE

- The following is an examiner's statement of reasons for allowance:

Prior arts of record do not render obvious, nor anticipate the combination of claimed elements including the technique of:

comparing the candidate object interval to a weighted measure of cluster extent for the current object cluster, the measure of cluster extent corresponding to a current distance spanned by all the objects in the current object cluster measured in the selected dimension of the context-related metadata, and comparing the candidate object interval to a weighted measure of object density for the current object cluster, the measure of object density corresponding to a measure of distribution of distances separating adjacent ones of the objects in the current object cluster measured in the selected dimension of the context-related metadata as recited in claims 1 and 22;

extracting context-related meta data corresponding to object generation locations associated with the objects, wherein the extracted context-related meta data are parsable into multiple levels of a geographical name hierarchy generated for browsing; and assigning location names to each cluster, wherein each cluster is assigned a respective location name based on the associated extracted context-related meta data corresponding to a level of the geographical name hierarchy selected to distinguish segmented clusters from one another as recited in claims 23 and 32;

for each object cluster selecting at least two constituent objects representative of beginning and ending instances in the corresponding constituent object sequence in the object cluster, wherein the at least two constituent object comprising first and last constituent objects in the corresponding constituent object sequence of the object cluster; and in a user interface, graphically presenting the selected constituent objects of each object cluster without graphically presenting representations of unselected ones of the constituent objects of the object clusters as recited in claims 33 and 51.

Thus, claims 1, 22, 23, 32, 33 and 51 are allowed. Dependent claims 2-21, 27-31 and 34-50 are allowed at least by virtue of their dependencies from claims 1, 23 and 33.

- Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG Q. PHAM whose telephone number is 571-272-4040. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JAMES K. TRUJILLO can be reached on 571-272-3677. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HUNG Q. PHAM
Primary Examiner
Art Unit 2159

/HUNG Q. PHAM/
Primary Examiner, Art Unit 2159
January 22, 2010